# Hazardous Substances HSW-PR32



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## 1. OBJECTIVE

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To prescribe the minimum requirements and implementing safe systems of work and learning that detail the procurement and safe use, handing, storage, transfer, inventory management and transport of hazardous substances at RMIT; to reduce, as far as reasonably practicable, the risks associated with substances, thereby protecting our community and the environment from harm.

## 2. BACKGROUND

N/A

## 3. SCOPE

This process applies to RMIT globally.

**NOTE** – Referenced legislation applies to Australian jurisdictions only. RMIT campuses in other jurisdiction must refer to local applicable legislation, where available.

**NOTE**: This process addresses Hazardous Substances as described under the *Globally Harmonised System (GHS)* and may also be applied to non-hazardous substances. However, it excludes asbestos containing materials, biological materials and radioactive materials, which are detailed in other processes.

This guideline does not apply to the following products if their use is not related to a work activity:

- food
- therapeutic agents
- cosmetics
- tobacco and tobacco products
- toiletries and toilet products
- hazardous substances which are used and are in quantities that are consistent with household use.

The guidelines also do not apply to:

- any substance that only has radioactive hazards i.e. class 7 dangerous goods (refer to the HSW-PR40 Radiation process)
- most class 9 (miscellaneous) dangerous goods
- any infectious substance of biological origin i.e., any viable micro-organism, such as a bacterium, virus, rickettsia, parasite, fungus, recombinant, hybrid or mutant, that is known or reasonably believed to cause disease in humans or animals (refer to the *HSW-PR44 Biological Safety* process).

## 4. Hazardous Substances versus Dangerous Goods

Hazardous substances are any substance, mixture or article that satisfies the criteria for a hazard class in the *Globally Harmonised System of Classification and Labelling of Chemicals (GHS)* that are used in the workplace. These can be classified according to their health, physicochemical and environmental hazards.

Dangerous goods are substances, mixtures or articles that, because of their physical, chemical (physicochemical) or acute toxicity properties, present an immediate hazard to people, property or the environment. The criteria used to determine whether substances are classified as dangerous goods are contained in the *Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code)*.



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Substances or articles defined under the **ADG Code** as Class 2, 3, 4, 5, 6.1, 8 or 9, goods too dangerous to be transported (GTDTBT) or C1 combustible liquids meet the definitions of <u>both</u> hazardous substances and dangerous goods.

## 5. WHAT MUST GO RIGHT?

The expected outcomes – known as 'what must go right' – will be that:

- All staff, students, researchers and third parties understand how to correctly handle, store, use, transfer, transport and dispose of Hazardous Substances in their area.
- All Hazardous Substances are correctly classified and accompanied by their most recent Safety Data Sheet (SDS), are listed on the Hazardous Substances Register (**ChemAlert** for Australian jurisdictions if electronic), and are stored, labelled, handled, decanted and disposed of in accordance with their SDS and Risk Assessment.
- Persons who purchase Hazardous Substances will seek the least harmful of hazardous substance available which will achieve the desired outcome.
- Hazardous Substances are acquired in accordance with the purchasing and risk assessment processes.

## 6. PROCEDURE / IMPLEMENTATION

## 6.1. Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

The United Nations' *Globally Harmonised System of Classification and Labelling of Chemicals (GHS)* is a single internationally agreed system of chemical classification and hazard communication through labelling and SDSs which includes harmonised criteria for the classification of physical, health and environmental hazards.

With full implementation of the GHS for use and handling, the *Australian Code for the Transport of Dangerous Goods by Road & Rail* (the *ADG Code*) also applies to the transport and storage of placard quantities of dangerous goods (and hazardous substances) in the work and learning environment.

The *Hazardous Chemical Information System (HCIS)* is a database of information on substances that have been classified in accordance with the GHS. HCIS contains GHS classifications and labelling information for over 4,500 chemicals and a searchable database of workplace exposure standards.

# 6.2. Classification

If a substance meets the criteria of the GHS, for one or more class, it is a hazardous substance. Each hazard class is split into categories, divisions and types which are explained through the new pictograms, signal words and hazard statements (Figure 1 extract from *Classification and Labelling for Workplace Hazardous Chemicals Poster*. **SafeWork Australia**).



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Classification		Labelling				
Hazard		Pictogram, Signal		Hazard Statement		
Class Category		code*	word	Code*	Text	
	Unstable explosive		Danger -	H200	Unstable explosive	
	Division 1.1			H201	Explosive; mass explosion hazard	
	Division 1.2			H202	Explosive; severe projection hazard	
- I -	Division 1.3			H203	Explosive; fire, blast or projection hazard	
Explosives	Division 1.4	GHS01	Warning	H204	Fire or projection hazard	
	Division 1.5	No GHS Pictogram (1)	Danger	H205	May mass explode in fire	
	Division 1.6	No GHS Pictogram (1)	No Signal Word	N/A	No Hazard Statement	
	(1)=Explosives o with the Austral	of Divisions 1.5 and 1.6 ne ian Explosives Code.	ed to be labelled	with their re	spective Dangerous Goods class label in accordance	

Figure 1 – Extract sample from Classification and Labelling for Workplace Hazardous Chemicals Poster

#### 6.2.1. Hazard Pictograms

Hazard pictograms provide a graphical representation of the substance's hazardous properties.



Figuire 2 – GHS Labelling Pictograms

#### 6.2.2. Signal words

Signal Words provide an indication of the relative severity of the hazard:

- DANGER Severe or significant hazard
- WARNING Less severe hazard.

#### 6.2.3. Hazard statements

- Describes the nature and severity of chemical hazard.
- Categorised in relation to physical/health/environmental hazards.
- Examples:
  - Highly flammable liquid and vapour
  - $\circ$  May cause respiratory irritation
  - o May cause cancer
  - o Contains gas under pressure
  - Causes severe skin burns and eye damage.



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#### 6.2.4. <u>Precautionary statements</u>

- Recommended measures to prevent or minimise risks during storage, handling, use or disposal.
- Categorised into prevention, response, storage and disposal.
- Replaces safety phrases under the old classification system.
- Examples:
  - o Keep away from heat/sparks/open flames/hot surfaces No smoking
  - o Dispose of contents in accordance with local Regulations
  - Do not breath dust/fume/gas/mist/vapours/spray
  - Get immediate medical advice/attention.

### 6.3. Labelling

Labels are required to be affixed on containers or pipework that contain hazardous substances. Additionally, non-hazardous substances should also be labelled to distinguish them from those that are hazardous.

Labels display information on any hazards associated with the hazardous substance, plus instructions and information on the safe storage, handling, use and disposal of the substance. Like an SDS, a label is an important source of information that can be used to control risks during use.

The responsibilities surrounding labelling are identical to safety data sheets in that it is the responsibility of the manufacturer to develop them and for the supplier to provide them when a hazardous substance is purchased.

When a hazardous substance has been manufactured at RMIT a label will also need to be developed. It is the responsibility of the person developing the hazardous substance to ensure that the label has been developed in accordance with **r149** of the *Occupational Health and Safety Regulations (VIC)* (the *Regulations*) and the *Compliance Code Hazardous Substances* (the *Code*) which outlines the minimum standards for labelling.

#### 6.3.1. Labelling of Containers

Correct labelling of containers under GHS includes the following elements:

- the product identifier
- name, Australian address and business telephone number of the manufacturer/importer
- identity and proportion of chemical ingredients
- hazard pictogram(s)
- hazard statement(s), signal word and precautionary statement(s)
- other information about hazards, first aid, emergency procedures
- expiry date (if applicable)
- written in English (legibly)

Manufacturers/suppliers must only supply GHS containers with GHS compliant labels.

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Flammosol —		Product identifier	
Contains: — Aliphatic hydrocarbons 95% Toxicole 5%	0.	Identity and proportion of each chemical ingredi	
	500ml		
$\wedge$	DANGER	Signal word	
( Mr ) ( dista)		Pictograms	
	Highly flammable liquid and vapour Toxic if swallowed Causes skin irritation	Hazard statements	
Keep away from sparks and open flames. – No smoking. Wear protective gloves and eye and face protection.	IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. Rinse mouth.		
Wash hands thoroughly after handling.	IF ON SKIN (or hair): Take off contaminated clothing and wash before re-use.	Precautionary statements	
Do not eat drink or smoke when using this product.	If skin irritation occurs: Get medical advice/attention. Rinse skin using plenty of soap and water.		
Store locked up in well ventilated place. Keep cool.	In case of fire: Use powder for		
Dispose of contents / container in accordance with local regulations.	exunction		
Refer to the Safety Data Sheet before	use	Other useful information	
Madeup Chemical Company, 999 Che	mical Street, Chemical Town,	Name, address and telephone number of the     Australian manufacturer or importer	

Figure 3 – sample GHS label

#### 6.3.2. Special Labelling Requirements

Special labelling requirements may be applied in some circumstances. The *Code* outlines specific guidance for:

- Small containers
- Decanted or transferred chemicals
- Hazardous waste products
- Dangerous goods packaged for transport
- Consumer products
- Agricultural or veterinary chemical products
- Therapeutic goods
- Poison or controlled substance

#### **Small containers**

Where a hazardous chemical is packaged in a container that is too small to attach a label with information that is required of hazardous chemical labels in general, then the label must include the minimum requirements of:

- Written in English (legibly)
- The product identifier
- Name, Australian address and business telephone number of manufacturer or importer
- Hazard statement OR pictogram

Any other element that is reasonably practicable to include (priority should be given to elements relating to the most significant hazards)

#### Flammosol

Refer to the Safety Data Sheet before use.

Madeup Chemical Company, 999 Chemical Street, Chemical Town, My State. Telephone: 1300 000 000

#### **Decanted or transferred chemicals**



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If a hazardous chemical has been decanted or transferred from the container in which it was packed and will not be used immediately or it is supplied to someone else, the label must include the minimum requirements of:

- Written in English (legibly)
- The product identifier
- Hazard statement OR pictogram

Where the entire decanted amount will be used immediately, labelling of its container is not required. Where a container is repeatedly used for decanting the same substance, a permanent label (including ALL Labelling of Containers requirements) must be attached to that container.

#### **Containers of waste**

Employers must ensure that any containers of waste produced or generated from hazardous substances are identified. The identification needs to reflect the nature of the waste as closely as possible for example the label may identify the substance as 'chlorinated solvent waste', 'acid waste', or 'caustic waste'.

### 6.3.3. Labelling of Pipework and Plant

A system or plant dedicated to a particular hazardous substance may be identified by colour coding in keeping with a published technical standard such as **AS1319 – Safety signs for the occupational environment** or **AS 1345 - Identification of the contents of piping, conduits and ducts**.

Training needs to be provided to ensure that staff, students, researchers and third parties understand the colour coding/identification method used.



Figure 4 – example if identifying pipework

#### 6.3.4. Non-Hazardous Substances

Where appropriate, non-hazardous substances should be clearly labelled to distinguish them from those that are hazardous and avoid inadvertent and inappropriate use.

## 6.4. Safety Data Sheets (SDS)

An SDS provides information on the identity of a product and any hazardous ingredients, potential health effects, toxicological properties, physical hazards, safe use, handling and storage, emergency procedures and disposal requirements specific to the substance. Any hazardous substance that is stored, handled or transported in an RMIT controlled workplace must have an accompanying SDS. The SDS must be referred to before purchasing a new substance and when undertaking a risk assessment for the use of a hazardous substance.

Properties of the SDS must meet the requirements established in **r145** of the *Regulations* and the *Code*. When a hazardous chemical has been manufactured at RMIT an SDS will also need to be developed. It is the responsibility of the local area developing the hazardous chemical to ensure that the SDS has been developed in accordance with the *Code*. It is especially relevant to research samples that may be sent off site for further analysis or research.



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Although it is the responsibility of the chemical manufacturer to develop an SDS and for the supplier to provide it, RMIT is responsible for making sure the SDS is available and accessible. If an SDS is not provided by the supplier then the purchaser needs to source it. An SDS can generally be located via a request to the supplier, downloaded from the supplier's website or on **ChemAlert**.

An SDS is to be renewed when the issue or revision date is greater than 5 years old or when the substance or information in the SDS has changed. If the SDS is held within the **ChemAlert** database, it should be automatically updated every 5 years (so long as that the manufacturer or supplier provides it to **ChemAlert** when requested). Where an SDS on **ChemAlert** is identified as not being within 5 years, the user should contact the manufacturer or supplier to obtain and updated version which can be forwarded to **ChemAlert** for uploading. However, if the chemical has been discontinued by the supplier and is still in use, the last SDS shall be retained.

#### 6.4.1. Legislative Requirements for SDSs

- Must be in English, and
- Contain Australian legal units of measurements, and
- State the date it was prepared / last reviewed, and
- State the name, Australian address and business telephone number of the manufacturer / importer, and
- State an Australian emergency number, and
- Contain the following 16 sections:
  - 1. Identification
  - 2. Hazard(s) identification
  - 3. Composition/ingredients
  - 4. First aid measures
  - 5. Fire-fighting measures
  - 6. Accidental release measures
  - 7. Handling and storage
  - 8. Exposure controls and personal protection

- 9. Physical and chemical properties
- 10. Stability and reactivity
- 11. Toxicological information
- 12. Ecological information
- 13. Disposal considerations
- 14. Transport information
- 15. Regulatory information
- 16. Other information

## 6.5. Hazardous Substances Register

Schools / departments must keep a register of all hazardous substances in accordance with **r162** of the *Regulations* and the *Code*. The register must include:

- List of all hazardous chemicals, including information regarding:
  - o product trade name and United Nations number
  - o Dangerous Goods Class and Packing Group (if applicable)
  - o typical and maximum quantities held and the package sizes and supplier details, and
  - $\circ \quad$  location of storage and point of use.
- The relevant SDS
- Any risk assessments

The register must be readily accessible by:

- A person (staff, students, researchers, third party) involved in using, handling or storing hazardous substances
- Anyone else likely to be affected (e.g., emergency services)



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Each laboratory/workshop/studio is required to maintain their stock holdings in **ChemAlert** to ensure that it accurately reflects what is in the area. **ChemAlert** must contain information on what is in the area including maximum quantity of a product that could be in the area at any time.

# 6.6. Manifest and Placarding Requirements

RMIT must maintain a Manifest of hazardous substances when quantities stored are above the "Manifest Quantity" in the table in *Schedule 2* of the *Dangerous Goods (Storage and Handling) Regulations (VIC).* The Manifest must be in the prescribed form described in *Schedule 3* of the *Dangerous Goods (Storage and Handling) Regulations (VIC).* 

WorkSafe VIC is required to be notified for quantities exceeding the manifest quantities as outlined in *Schedule 2* of the *Dangerous Goods (Storage and Handling) Regulations (VIC)*.

When emergency services respond to fires and chemical spills at a workplace or learning institution using, storing or handling hazardous chemicals, the responders need to know the potential hazards involved at such incidents. For effective and efficient emergency action, they need information about the type, quantity and locations of the hazardous substances stored at the workplace. Placards are a means of alerting the emergency services and other persons to the presence of hazardous substances and providing information about them.

A "HAZCHEM" placard, which meets the requirements of *Schedule 4* of the *Dangerous Goods (Storage and Handling) Regulations (VIC)*, must be displayed at locations where the quantity of hazardous substances/dangerous goods as above the "*Placarding Quantity*" in the table in *Schedule 2* of the *Dangerous Goods (Storage and Handling) Regulations (VIC)*. Placarding requirements (the location where placards are required to be displayed) is detailed in *r48* of the *Dangerous Goods (Storage and Handling) Regulations (VIC)*.

A placarding report is available for each storage location in ChemAlert.

Senior Leaders are responsible to ensure that locations where quantities of hazardous substances and dangerous goods require a manifest and placarding are identified, manifests are maintained and placards are displayed.

## 6.7. Restricted Hazardous Substances

Restricted substances are those which prohibit or restrict the use of certain hazardous substances or situations. Acquiring and using Restricted Hazardous Substances may require RMIT to hold an applicable license and/or for RMIT and/or the user to hold an applicable permit.

Licenses and permits must be obtained from the applicable Regulator prior to purchase.

### 6.7.1. <u>Carcinogenic Substances</u>

The requirements for Carcinogenic Substances are detailed in *HR* – *HSW-PR32- WI02* – *Carcinogen Substances Guidelines* 

### 6.7.2. <u>Scheduled Drugs and Poisons</u>

The requirements for Scheduled Drugs and Poisons are detailed in *HR* – *HSW-PR32-WI03* – *Scheduled Drugs and Poisons Guidelines* 



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### 6.7.3. High Consequence Dangerous Goods (HCDG).

In Victoria, ammonium nitrate, calcium ammonium nitrate containing more than 45% ammonium nitrate, ammonium nitrate emulsions and mixtures containing more than 45% ammonium nitrate are considered high consequence dangerous goods.

### 6.7.3.1. What are not considered HCDG

Solutions and ammonium nitrate products that are class 1 explosives are not HCDG. Solutions refer to water-based mixtures where all the HCDG is dissolved and there are no visible solids particles in the HCDG/water mix.

### 6.7.3.2. What they are used for

Ammonium nitrate is used to make products like fertilizers and is a key ingredient in explosives. Industries like agriculture and mining rely on the use of HCDG. Its misuse can have catastrophic results. If not used appropriately it poses significant security and safety risks, therefore its use is tightly controlled through a licensing and permit system, with security and police checks.

## 6.7.3.3. <u>Types of HCDG</u>

The following United Nations (UN) numbers are considered HCDG. UN numbers are a globally recognised way of labelling dangerous goods.

UN Number	Proper shipping name	Class or division	Packing group
3375	Ammonium nitrate emulsion or suspension or gel, intermediate for blasting explosives	5.1	II
3139	Oxidising liquid, N.O.S.	5.1	    
1942	Ammonium nitrate with not more than 0.2% total combustible material, including any organic substance calculated as carbon, to the exclusion of any other added substance.	5.1	III
2067	Ammonium nitrate-based fertiliser	5.1	Ш
2071	Ammonium nitrate-based fertiliser	9	111
N/A	Calcium ammonium nitrate	N/A	N/A

### 6.7.3.4. Pictogram symbols for labelling HCDG



**Class 5.1 - Oxidising agent** 

**GHS** pictogram equivalent

Class 9 - Miscellaneous dangerous goods

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*This symbol is used on goods with the following UN numbers:* 3375, 3139, 1942 and 2067

This symbol is used on goods with the following UN numbers: 2071

### 6.7.3.5. <u>Main hazards of ammonium nitrate</u>

There are three main hazards associated with ammonium nitrate:

- **Decomposition:** ammonium nitrate melts at 170 degrees celsius and above 210 degrees celsius it decomposes releasing toxic gas
- **Fire:** ammonium nitrate in solid or liquid state is an oxidising agent which supplies oxygen to the fuel in a fire and supports burning even where air is excluded
- **Explosion:** in a fire, hot pools of ammonium nitrate liquid may form and if confined (for example, in a drain) may explode

#### 6.7.3.6. <u>Risk management of HCDGs</u>

Colleges/schools/departments which occupy premises where dangerous goods are stored and handled must make sure any associated risks are eliminated or reduced. Colleges/schools/departments must consider whether the quantity of dangerous goods can be reduced, and whether other goods, or dangerous goods, with lower risks can be substituted.

Colleges/schools/departments must make sure any risk control measures are reviewed and if necessary revised:

- before any change is made to a process or system that is likely to change the risks associated with storing and handling dangerous goods
- if required following an investigation due to an incident at the premises
- if they do not adequately control the risks.

The *Dangerous Goods (Storage and Handling) Regulations 2012* list what must be consider when identifying hazards at premises where dangerous goods are stored and handled.

#### 6.7.3.7. Safe storage and handling of HCDGs

- Use an appropriate building. If ammonium nitrate is stored in a building it should be a well-ventilated, singlestorey building made of a material that will not burn.
- Keep ammonium nitrate dry. The risk of explosion increases if the product gets wet and the surface forms a crust on the outside. The crust confines the decomposing gases making explosions more likely.
- Store away from drains, channels and pits where molten ammonium nitrate from a fire could become confined.
- Store away from ignition or heat sources.
- Store ammonium nitrate at least 1.2m away from walls. Regularly clean walls and framing or structures (depending on where it is stored).
- Don't store ammonium nitrate in stacks higher than 3m.
- Provide appropriate fire protection as per the safety data sheet.
- Provide information and training to relevant employees about safe storage and handling.

#### 6.7.3.8. Storing HCDGs away from incompatible materials

Do not store ammonium nitrate with incompatible materials as the risk of fire and explosion is increased. This includes:

- flammable or combustible liquids such as petrol, diesel, oil, grease, solvents, oil-based pesticides, gas cylinders
- combustible materials including organic matter, hay, straw, animal feed, wooden pallets (ammonium nitrate should be stored away from such materials by a distance of at least 8m)

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• finely powdered metal zinc

Separate ammonium nitrate from:

- class 8 corrosive liquids, acids and alkalis
- chlorites, chlorates, bromides
- cement, lime, sulphur, hexamine
- galvanised iron, copper, zinc

A complete list of incompatible materials can be found in *Australian Standard* 4326 - Storage and handling of *oxidizing agents*.

#### 6.7.3.9. HCDG licences and permits

RMIT must have an appropriate licence or permit to import, export, manufacture, store, sell, supply, use, handle, transfer, transport or dispose of HCDG.

Licence and permit applicants must also undergo a security and police check.

Licenses and permits are valid for five years but may be renewed for a further term.

#### 6.7.3.10. <u>Licences</u>

RMIT will only be given an HCDG licence if it can demonstrate a legitimate need. **WorkSafe Vic** requires applicants to submit a security plan with the application form outlining how the College/school/department will deal with the many risks associated with high consequence dangerous goods.

#### 6.7.3.11. <u>Permits</u>

Staff, students, researchers and third parties will be required to get a permit if they access HCDG unsupervised. Permits are only issued if RMIT holds a HCDG licence.

### 6.7.4. Substances of Security Concern

RMIT is committed to meeting the standards developed by the **Council of Australian Government** that are detailed in the **National Code of Practice for Chemicals of Security Concern**. The code of practice is to promote effective chemical security management practices throughout the chemical supply chain, and to protect against the diversion of chemicals for terrorist or criminal purposes.

This code applies to any quantity of the 15 chemicals that can be used to make homemade explosives or toxic devices listed in the table below. It includes chemical substances or mixtures of substances, at concentrations specified in the table. Although the code applies to these 15 chemicals, consideration should be given by Schools/departments to applying the code where appropriate if they handle, manage or store any of the 96 chemicals of security concern listed in **Appendix A** of the **National Code of Practice for Chemicals of Security Concern**.

Precursors to homemade explosives		
Chemical	Concentration	
Ammonium perchlorate	<ul> <li>a. in a water-based solution containing 10% or higher of ammonium perchlorate; or</li> <li>b. in a form other than a water-based solution, at a concentration of 65% or higher</li> </ul>	
Hydrogen peroxide	<ul> <li>a. in a water-based solution at any concentration; or</li> <li>b. in a form other than a water-based solution, at a concentration of 15% or higher</li> </ul>	
Nitric acid	at a concentration of 30% or higher	



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Nitromethane	at a concentration of 10% or higher
Potassium chlorate	a. in a water-based solution containing 10% or higher of potassium chlorate; or
	<b>b.</b> in a form other than a water-based solution, at a concentration of 65% or higher
Potassium nitrate	a. in a water-based solution containing 10% or higher of potassium nitrate; or
	<b>b.</b> in a form other than a water-based solution, at a concentration of 65% or higher
Potassium perchlorate	a. in a water-based solution containing 10% or higher of potassium perchlorate; or
	<b>b.</b> in a form other than a water-based solution, at a concentration of 65% or higher
Sodium azide	at a concentration of 95% or higher
Sodium chlorate	a. in a water-based solution containing 10% or higher of sodium chlorate; or
	<b>b.</b> in a form other than a water-based solution, at a concentration of 65% or higher
Sodium perchlorate	a. in a water-based solution containing 10% or higher of sodium perchlorate; or
	<b>b.</b> in a form other than a water-based solution, at a concentration of 65% or higher
Sodium nitrate	a. in a water-based solution containing 10% or higher of sodium nitrate; or
	<b>b.</b> in a form other than a water-based solution, at a concentration of 65% or higher
	Toxic chemicals
Aluminium phosphide	at any concentration.
Chlorine (gas only)	at any concentration.
Potassium cyanide	at any concentration.
Sodium cyanide	at any concentration.

Table 1 – extract from National Code of Practice for Chemicals of Security Concern.

Schools / departments are required to facilitate risk management practices within local areas that aim to identify security gaps and apply new or enhance existing control measures to protect against loss and diversion of any of these substances.

Risk management activities are to be completed in accordance with the *HR* – *HSW-PR09* – *Risk Management* process. Security topics surrounding the storage, transport and/or handling of substances of security concerning including staff and third-party checking, personnel security awareness, inventory control measures, purchasing processes, theft and diversion procedures, physical access, personnel access and transportation must be evaluated throughout the risk management process.

In instances where **Substances of Security Concern** are suspected of being lost, stolen or misused please contact the Supervisor and Operational Leader <u>immediately</u>.

The Operational Leader is responsible for further reporting in line with *HR* – *HSW* – *PR10* – *Incident Management and Investigation* process.

Further information is available from the Australian Government Department of Home Affairs *Chemicals of Security Concern* website.

## 6.8. Emergency Response

Schools / departments must develop and document local emergency procedures for chemical spills based on risk assessments of the work and learning spaces and in line with the *HSW-PR10 - Incident Management and* 



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*Investigation* process. General emergency procedures for chemical spills are provided in RMIT's *Emergency Management Plan*.

Manifest and Placarding requirements assist emergency services to respond to any incidents by notifying them of the type, quantity, and locations of hazardous substances on site.

The need for fire protection and the appropriate fire protection system should be determined by a risk assessment. The "fire protection system" includes fire detection, fire suppression and firefighting equipment, which may be fixed or portable. The risk assessment must take into account:

- the types and quantities of hazardous substances/dangerous goods and
- other materials and substances and
- how they are stored and handled and
- the types of incidents these could potentially cause.

The fire protection system must be installed, tested and maintained in accordance with legislative requirements. Local Operational Leaders are to request additional fire protection equipment through PSG, as required. Operational Leaders must report faulty or defective equipment to PSG.

Spill containment must be provided to hold the spill of the largest package. This may be in the form of secondary packaging, temporary or permanent bunding, or draining into an underground sump or tank. Any area or receptacle intended to contain spills or leaks must not be shared with any other substances, including other hazardous substances that are not compatible with the hazardous substances to be contained.

Ensure spillage controls are in place to prevent or limit environmental contamination, and that ventilation is adequate for storage, handling and draining. This may require a ventilation survey.

Suitable and stocked spill kits must be made available based on the hazardous substances in the area. Spill kits must be checked periodically to ensure that they are accessible and fully stocked as required.

## 6.9. Incident Reporting and Investigation

All incidents, including near misses, involving hazardous substances and breaches of processes around **Substances of Security Concern** must be reported as soon as possible to supervisors and entered in P.R.I.M.E. (or equivalent). Some incidents relating to hazardous substances may need to be reported to the Regulator and possibly police. In such cases, notify your Senior Advisor from the HSW Team to confirm requirements. The Senior Advisor is responsible for reporting and notification.

Breaches of processes around **Substances of Security Concern** must also be reported to the applicable Regulator(s), including police. In such cases, notify your Senior Advisor from the HSW Team to confirm requirements. The Senior Advisor is responsible for reporting and notification.

All incidents, including near misses, involving hazardous substances and breaches of processes around **Substances of Security Concern** must be investigated and corrective actions developed and implemented.

Incident reporting and investigations must align with the requirements detailed in the *HR* – *HSW-PR10* – *Incident Management and Investigation* process.

## 6.10. Hazardous Waste Disposal

The requirements for then disposal of hazardous substances is detailed in *HR - HSW-PR32-WI01 - Storage, Use & Disposal of Hazardous Substances.* 



## 6.11. Purchasing

Every effort must be made to ensure that the quantities of hazardous substances to be stored are kept to a minimum, in accordance with daily needs and risk. To prevent duplicate purchases, stock holdings in **ChemAlert** must be checked prior to purchasing to see if the product is already available in the work/learning area or elsewhere within RMIT.

Prior to purchasing chemicals, RMIT staff, students, researchers and third parties are required to obtain the Safety Data Sheet(s) (SDS) and complete the form *HSW PR32-TM01 – Hazardous Materials Pre-Purchase Risk Assessment*.

Further details and requirements are in the Pre-Purchase Risk Assessment section below.

It is important to note that a Hazardous Substance can also be a scheduled carcinogen and/or a drug, poison or controlled substance or substance of security concern, high consequence dangerous good or drug precursor or alcohol.

Purchasers must consult with the local Tech Staff and / or with the applicable Senior Advisor, Health and Safety prior to purchase should they need assistance or advice.

## 6.12. Transport

A risk assessment must be performed when hazardous substances and dangerous goods are to be transported. Dangerous goods during transport are subject to the *Dangerous Goods (Transport by Road or Rail) Regulations* (*VIC*) and ADG Code. Dangerous goods transported by air must be packaged by a licenced dangerous goods handler.

Schools / departments must develop local, documented processes for transporting "*minor quantities*" of hazardous substances and dangerous goods for purposes such as fieldwork or between labs, workshops and studios between buildings. The processes must be based on the risk assessment, guidance within the applicable SDS' and including consideration of such elements as:

- segregation from food stuffs
- segregation from other incompatible goods being
- applicable labelling and signage
- double packaging
- spill control

Hazardous substances and dangerous goods should not be transported within the cabin of the vehicle.

Refer to the *ADG Code* for what constitutes exempt "minor quantities" outside the scope of the *ADG Code*.

## 6.13. Risk Management

#### 6.13.1. Risk Assessment

This overall aim of the hazardous substance risk assessment is to identify hazards that are not, or may not be, detailed in the SDS for the substance, prioritise the hazards by assessing the associated risk and control them to eliminate the risk or contain it to an acceptable level. If a hazardous substance is used across different areas for the same purposes and the nature of the risk is comparable, then one generic detailed risk assessment may be used for the different areas.

Risk Assessments for hazardous substances can be completed by those persons with sufficient knowledge and skills to evaluate the health risks to staff arising from teaching and research involving the use of the hazardous



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substances. Risk assessments should always be completed by more than one person (three people is recommended) and must involve consultation with other key stakeholders and subject matter experts (SME) where appropriate.

Complete a risk assessment using the risk assessment template *HR* – *HSW-PR09-TM01* – *HSW Risk Assessment Template* (or P.R.I.M.E. or equivalent) and guidance in the *HR* - *HSW-PR09* - *Risk Management* process.

A risk assessment must be completed:

- Before the purchase of the hazardous substance
- Before activities using hazardous substances commence
- Before the introduction of new processes or equipment that use hazardous substances
- When processes or equipment that use hazardous substances are modified

Risk assessments must include but not limited to:

- The physicochemical properties and stability of the substance and potential effects on the work/learning environment, personnel or external environment
- Types and quantities of wastes which may be generated and their storage, handling, treatment and disposal requirements
- Emergency situations which may arise from the task, process or equipment, e.g., from a spill, a fire or an explosion
- The level of risk associated with working/learning outside of the normal operating hours in the area where the substance is used or stored, in isolation or alone i.e., during times when the immediate emergency response, e.g. First Aid is limited
- Determining if and what Health Monitoring is required
- Security requirements for managing unauthorised access, including for Substances of Security Concern and Security Sensitive Dangerous Substances, High Consequence Dangerous Goods.

Risk assessments must be reviewed:

- At least every 6 months (minimum)
- Following an incident
- When changes are made to the task, process or equipment that uses hazardous substance or
- If requested to do so by an HSR
- there is evidence to indicate that the assessment is no longer valid
- whenever RMIT is advised on any necessary preventative or remedial action as a result of Health Monitoring or an incident
- whenever there is a significant change in the work to which the assessment relates
- whenever a new SDS is issued (maximum of 5 years) or there is a change in legislation

### 6.13.2. Assessing Risk

When assessing health and safety risks associated with the storage, use or handling of a hazardous substance the following points must be considered but not limited to:

- the routes of entry by which the substance can affect a person's health
- the physical form and concentration
- the chemical and physical properties of the substance
- determining who could be exposed and when this could occur
- how often is exposure likely to occur and for how long
- what is the estimated exposure to the hazardous substance
- exposure standards for the substance



- spill response kits on hand or required, and PPE
- provision of appropriate fire protection and fighting equipment
- establish that containers are suitable and fully labelled
- establish location of the SDSs
- establish if and when personal monitoring or health surveillance takes place
- establish whether training has been or is required to be provided to staff, students, researchers or third parties.

Physiochemical risks must also be considered, including but not limited to:

- fire and explosion
- identifying ignition sources
- factors affecting fire and explosion risks
- off-site risks

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- risks from corrosive substances
- compressed gases
- asphyxiation hazards
- compressed air

### 6.13.3. Pre-purchase Risk Assessment

Prior to purchasing substances, RMIT staff, students, researchers and third parties are required to obtain the Safety Data Sheet(s) (SDS) and complete the form *HSW PR32-TM01 – Hazardous Materials Pre-Purchase Risk Assessment*.

It is important to note that a Hazardous Substance can also be a dangerous good, and/or a scheduled carcinogen, and/or a drug, poison or controlled substance and/or a particular substance of security concern and/or a high consequence dangerous good and/or a drug precursor or alcohol.

The following processes must be followed when completing a Pre-purchase Risk Assessment for:

- scheduled carcinogens HR HSW-PR32- WI02 Carcinogen Chemicals Guidelines
- scheduled drugs and poisons HR HSW-PR32-WI03 Scheduled Drugs and Poisons Guidelines
- Check the regulated list of scheduled carcinogens in your state/territory/country. If the substance is on the list, you must check that you have the appropriate licence to store and use the substance. If no RMIT licence exists for that carcinogen, RMIT must apply for a licence prior to purchasing the substance and record use of the carcinogen in the *Hazardous Chemical Register (ChemAlert)*. Licenses issued to RMIT must be managed and maintained by the local Senior Technical Advisor or Senior OHS/HSW Coordinator.
- If intending to use a scheduled carcinogen complete HSW-PR32-FR01 Scheduled Carcinogens User Notification Form and attach the risk assessment and SDS. The risk assessment must be completed and approved by both the Operational Leader and the College's/school's/department's Senior Technical Advisor or Health and Safety Coordinator.
- Keep a record of all transactions of usage using from *HSW-PR32-FR02 Scheduled Carcinogens User Transaction*
- If a staff member, student, researcher or third party who has handled a carcinogen has completed work or study at RMIT, form *HSW-PR32-FR03 Scheduled Carcinogens Exit Statement* must be completed
- If the substance is a scheduled poison, you must check that the College/school/department has a current
  Poisons permit that covers the use of that substance and an associated Poisons Control Plan. If no permit exists,
  or the current permit does not cover the poison in question, then update or apply for a permit as required by
  your state/territory/country. Permits issued to RMIT must be managed and maintained by the local Senior
  Technical Advisor or Senior OHS/HSW Coordinator.

There may be other regulatory requirements for Substances of Security Concern, High Consequence Dangerous Goods, drug precursors and alcohols.



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Refer to above section **Restricted Hazardous Substances** for where applicable information may be obtained for completing Pre-purchase Risk Assessment.

Purchasers should consult with the local Tech Staff and/or with the applicable Senior Advisor, Health and Safety for assistance or advice when completing a Pre-purchase Risk Assessment.

#### 6.13.4. <u>Risk Control Strategies</u>

The documented risk assessment must identify control measures to be implemented to minimise the risk to the lowest level as reasonably practical. Risk control must be achieved following the hierarchy of controls. Elimination should be considered to control the risk; the best way of achieving this is to remove the hazard. If this is not possible the risk must be minimised using one or more of the other control options from the hierarchy. Risk control is to be conducted in accordance with *HR* – *HSW-PR09-WI03* – *HSW Risk Control* guidance document.

Risk control strategies must include, but not be limited to, and consider for the following:

#### 6.13.4.1. Stability

Controls must be put in place to ensure hazardous substances do not inadvertently become unstable, decompose or change. Controls must not increase the risk associated with the hazardous substances.

If the stability of hazardous substances is dependent on the maintenance of levels of stabilisers, those levels must be maintained as specified by the manufacturer of the hazardous substances. Additionally, if the hazardous substances are required to be stored or handled with a particular temperature range specified by the manufacturer, they must be stored or handled within that temperature range.

#### 6.13.4.2. Ignition Sources

Provisions must be made to ensure any ignition sources are eliminated from hazardous areas. Ignition sources include, but are not limited to, naked flames, static electricity, heat, sparks, internal combustion engines, heated surfaces electrical equipment, radio transmitters, mobile phones and oily material.

#### 6.13.4.3. Ventilation

The generation of flammable or harmful atmospheric levels must be kept to a minimum using adequate ventilation.

#### 6.13.4.4. Emissions

Any atmospheric emissions (toxic, corrosive, flammable, explosive or asphyxiant) that poses a risk to people or the environment must be kept within required limits and exhausted away from occupied areas.

#### 6.13.4.5. <u>Contamination of food and personal products</u>

Provisions must be made to ensure that hazardous substances cannot contaminate food, food packaging or personal use products.

#### 6.13.4.6. Bulk containers

For areas where hazardous substances are stored in bulk, it must be ensured that:

- the container and any associated pipe work are provided with stable foundations and supports
- any pipe work or equipment connected to the container is installed to prevent excessive stress on the container, pipe work or equipment
- the container and any associated pipe work are protected from deterioration.
- the container and any associated pipe work are protected from impact.

### 6.13.4.7. <u>Transfer</u>

When transferring hazardous substances:



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- an appropriate area must be set aside for the purposes of transfer or decanting of hazardous substances products
- vapour or dust generation during transfer must be minimised
- where static electricity is generated, appropriate controls measures must be adopted to minimise the charge build up e.g., earthing, bonding or relaxation
- ensure the suitability of pipe work, attachments and associated safety systems in areas where the risk elimination or control measures have been proposed.

Consideration must be given to minimising the generation of static electricity and for sources of heat or ignition.

#### 6.13.4.8. <u>Safety equipment and access</u>

Safety equipment must be provided, maintained and accessible if it has been determined to be required to control an identified risk in relation to the storage or handling of hazardous substances (including personal protective equipment and clean up equipment such as neutralisers, decontaminants and associated equipment). Additionally, a safe means of access to and from and within any locations where hazardous substances are stored or handled must be provided and maintained.

#### 6.13.4.9. Decommissioning plant and equipment

Plant, equipment or containers that are to be disposed of must be made free from hazardous substances or otherwise made safe. If hazardous substances have not been placed in or taken from the plant, equipment or container for a continuous period of 12 months they should be made free of hazardous substances or otherwise made safe.

Provisions must be made if the hazardous substances container has been made free from hazardous substances to ensure any references, signs, symbols or warnings in regard to dangerous foods it previously contained have been removed or obliterated.

If hazardous substances have not been put in or taken out of an underground, or partially underground or fully mounded tank (other than an LPG tank) any remaining hazardous substances must be removed from the tank and abandon them in accordance with *AS 1940 - The storage and handling of flammable and combustible liquids*.

#### 6.13.4.10. Cleaning and housekeeping

A regular cleaning program must be in place for those areas storing or handling hazardous substances. This process must include the removing of dust deposits from exposed surfaces. Cleaning may create more contaminants around surfaces or make them airborne so suitable methods must be investigated.

#### 6.13.4.11. Materials handling

Consideration must be given to minimising quantities of hazardous substances that are kept on site where possible e.g., purchase 2.5L Winchester instead of 20L drum to minimise handling of hazardous substances and the risk of spills.

#### 6.13.4.12. Segregation & separation

Provisions must be made to ensure hazardous substances that are not compatible with other substances (including other hazardous substances) are stored and handled separately from the other substances so that a loss of containment or any other interaction cannot cause a serious incident.

Minimum segregation distances are:

- solids/liquids 1.5m
- gases 3m.

Hazardous substances should be separated from people or property. Where barriers are used, these should be impervious.



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### 6.13.4.13. Fuel dispensing

The following controls must be in place for fuel dispensing:

- any self-service fuel dispensing machine shall not be operated by a person under the age of 16 years
- the driver of a vehicle being refuelled shall ensure that the vehicle is switched off before the fuel tank is opened
- the driver of a vehicle being refuelled shall ensure the vehicle remains switched off while the fuel is being dispensed into the vehicle
- no smoking or any other ignition sources are allowed within 3 metres of any point where fuel might be exposed, particularly when receiving or dispensing.

#### 6.13.4.14. Monitoring and review

Implemented controls must be reviewed to ensure that they are effective and minimising injury. This can be completed by inspecting the area or process and identifying if the controls are maintained and working properly and by completing periodic Compliance Inspection checklist. The effectiveness of controls can also be reviewed by analysing injuries and incidents which may have occurred.

## 6.14. Health Monitoring

The aim of air and health monitoring is not as an alternative to the maintenance of control measures, but as a method to ensure that control measures are effective and to provide an opportunity to reinforce specific preventative measures and safe work practices. Details on health monitoring can be found in the *HR* – *HSW-PR47* – *HSW Health Monitoring* guidelines

Health monitoring of a person aims to identify changes in the person's health status because of exposure to certain substances. This may include biological monitoring where blood, urine and tissue are tested for various hazardous chemicals and personal monitoring such as the use of radiation and other badges. It may be performed in conjunction with environmental monitoring where the workplace is monitored for dust and particulates, noise, temperature, etc

Health monitoring is mandatory for substances listed in *Schedule 9* of the *Regulations*, including:

- Acrylonitrile
- Arsenic (inorganic)
- Benzene
- Cadmium
- Chromium (inorganic)
- Creosote
- Crystalline silica
- Isocyanates

- Lead
- Mercury (inorganic)
- MOCA (4,4'-Methylenebis-(2-chloroaniline))
- Organophosphate pesticides
- Pentachlorophenol (PCP)
- Polycyclic aromatic hydrocarbons (PAH)
- Thallium
- Vinyl chloride

# 6.15. Inductions and Training

It is a requirement that local lab/workshop/studio safety inductions and training are developed, documented and implemented by Schools and departments to ensure consistent information of the relevant local hazards is communicated during each induction and training. This may include mandatory RMIT-wide training modules available on learning platforms for staff and students.

The level and detail of the safety induction and training should depend upon the risk associated with processes carried out and the materials and equipment stored within the on the lab/workshop/studio.



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Operational Leaders must ensure induction and training in the storage, use and disposal of substances in the laboratory/workshop/studio under in their area of responsibility. The staff, student, researcher or third party being trained must be deemed competent in the task(s) before the Operational Leader authorises the record of training.

The induction and training must include, but is not limited to:

- The location of SDSs and risk assessments for the substances stored and used in the area
- Familiarity with local substance processes or equipment that use substances
- The use and location of Personal Protective Equipment (PPE) and emergency equipment
- Local emergency response procedures
- Substance waste storage, handling, labelling and disposal processes
- Chemical spill management and handling procedures
- Correct operation of fume hoods
- Correct storage and segregation of incompatible substances
- Purchasing process for hazardous substances, including pre-purchase risk assessment

The induction and training content must be reviewed annually (at a minimum). More frequent reviews may be conducted when, for example, the hazards in the area change or following an incident.

Any person working or learning in a laboratory, workshop or studio must complete and comply with the local area's inductions and training.

The completion of induction and training must be recorded and retained locally and maintained in accordance with *HR* – *HSW-PR06* – *HSW Training, Competence and Awareness* and *HR* – *HSW-PR04* - *Records Management.* 

### 6.16. Records

#### 6.16.1. Maintenance, Inspections and Repairs

Records must be kept confirming that maintenance, inspections and repairs of storage areas and handling processes are regularly carried out. Inspection of storage areas should be undertaken and documented in line with the *HR* – *HSW-PR12* – *Workplace Inspections* process.

#### 6.16.2. Records of Risk Assessments

Local areas must maintain completed risk assessments and must be made available on request. Records shall be in accordance with this and *HR* – *HSW-PR04* - *Records Management* processes.

#### 6.16.3. Documentation

Any other documents generated as part of this process are to be maintained as set out in *HR* – *HSW-PR04* - *Records Management* process

## 6.17. Program Evaluation

To ensure that this process and its requirements continue to be effective and applicable to RMIT, the program will be reviewed regularly by the HSW Unit and relevant stakeholders. Conditions which might warrant a review of the process and guidelines on a more frequent basis would include:

- an injury or near miss resulting from storage and handling of hazardous substances and dangerous goods
- incidents related to storage and handling of hazardous substances and dangerous goods
- changes to legislation and associated standards
- Staff, student or researcher concern.



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Following completion of any review, the program will be revised and, if necessary, updated to correct any deficiencies.

## 7. Responsibilities

## 7.1. Senior Leaders

- Ensure there are resources available to implement this process in their area of control
- Review registers and performance indicators on a regular basis

## 7.2. Operational Leaders

- Implement this process in their area of control
- Undertake relevant Hazardous Substances training
- Ensure there is a current substance register for areas under their control
- Ensure risk assessments on hazardous substances in accordance with this process are completed, signed off, reviewed when necessary, and are readily accessible to all users
- Ensure staff, students, researchers and third parties within their area of control comply with this process
- Ensure appropriate signage and labelling of chemical containers and storage facilities is in place
- Ensure SDSs for all substances stored or in use within their area of control are current and readily accessible
- Monitor compliance with this process and take the necessary action to address non-compliance
- Ensure DG are stored in DG cabinets (that meet the applicable Australian Standard) as necessary, and segregation of incompatible hazardous substances and DG occurs.
- Ensure spill kits (including appropriate personal protective equipment such as chemically resistant gloves, goggles and respirator with cartridges) and first aid facilities are readily available
- Establish the need for health monitoring and implement where required

# 7.3. Staff, Students, Researchers and Third Parties

- Undertake relevant Hazardous Substances training
- Conduct or participate in risk assessments on hazardous substances in accordance with this process
- Ensure SDSs for all hazardous substances used in their work, learning or research are read and understood
- Follow this process and all reasonable instructions relating to HSW and control of Hazardous Substances
- Comply with requirements listed in SDS, safe work documents (e.g., Safe Work Instructions, Safe Operating Procedures or other), Risk Assessments, guidelines and instructions relating to HSW

## 7.4. Visitors

- Comply with the requirements of induction
- Undertake training where required
- Comply with all safety rules and instructions

## 7.5. HSW Team

- Regularly review this process in consultation with relevant members of staff
- Develop and report on Key Performance Indicators relevant to this process
- Monitor compliance with this process and report on outcomes

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## 8. Definitions

Defines any key terms and acronyms relating to the process where they app

Term / acronym	Definition			
Australian Dangerous Goods Code	The document known as the Australian Dangerous Goods (ADG) Code comprising the Australian Code for the Transport of Dangerous Goods by Road and Rail, available at www.ntc.gov.au.			
Bulk	Any quantity of hazardous substance that is:			
	<ul> <li>in a container with a capacity exceeding 500L or net mass of more than 500kg, or</li> <li>if the hazardous chemical is a solid; an undivided quantity exceeding 500kg</li> </ul>			
	Static tanks and transportable containers such as isotainers and intermediate bulk containers (IBCs) are examples of bulk containers (ie tanks) requiring a tank placard for hazardous chemicals at the workplace.			
Combustible	<ul> <li>C1 – substance having a flashpoint of &gt;60.5°C and &lt;150°C</li> <li>C2 – substance having a flashpoint of &gt;150°C</li> </ul>			
	The criteria for classifying combustible liquids are contained in AS 1940 - The storage and handling of flammable and combustible liquids.			
Dangerous Good	Dangerous goods are substances capable of causing harm to people and property because of their hazardous properties. They may be corrosive, flammable, combustible, explosive, oxidising or water-reactive or have other hazardous properties.			
Dangerous Goods Class	The hazard class of the dangerous goods as stated in the ADG Code. A class may include divisions and packing groups (PG).			
	There are nine classes of dangerous goods:			
	Class 1 - Explosives			
	Class 2 - Gases (Flammable, Compressed/Non-Toxic, Poisonous)			
	Class 3 - Flammable Liquids     Class 4 - Elammable Solids			
	<ul> <li>Class 5 - Oxidisers and Organic Peroxides</li> </ul>			
	Class 6 - Toxic Substances			
	Class 7 - Radioactive Substances			
	Class 8 - Corrosive Substances     Class 9 - Miscellaneous Dangerous Goods			
Dangerous Goods	Dangerous Goods Class label, often called a "diamond".			
Diamond	It is possible for substances to display more than one characteristic; therefore, these substances will display more than one class label. In those circumstances the substance will have a full primary class label and a subsidiary label which is less prominent that the primary.			
GHS	Globally Harmonised System of Classification and Labelling of Chemicals			



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Term / acronym	Definition
Hazard Pictogram	The GHS specifies 9 pictograms, having regard to physical, health and environmental hazards. They provide a graphical representation of the chemical's hazardous properties.
Hazard Statement	Hazard statements describe the nature of a hazard, including the degree of the hazard. These replace Risk Phrases.
HAZCHEM Code	A HAZCHEM Code has been developed to assist emergency services around the world. It is a first response instruction which provides advice on dealing with issues such as a fire or an environmental contamination situation involving dangerous goods.
High Consequence Dangerous Good (HCDG)	High consequence dangerous goods are those which pose significant security and safety risks if they are not used appropriately.
Label	A set of information on a container which identifies the substance in the container, identifies whether the substance is hazardous and provides basic information about the safe use and handling of the substance
PG (packing group)	To further assist with the identification of dangerous goods and their particular hazards, those of class 3, 4, 5, 6 and 8 are assigned to a packing group (PG) which represents the "level of danger" to persons exposed.
	<ul> <li>PG I = great danger</li> <li>PG II = medium danger</li> <li>PG III = minor danger</li> </ul>
Placard	A sign displaying information outlined in Schedule 2 of the <i>Dangerous Goods (Storage and Handling) Regulations (VIC)</i> to communicate information about hazardous chemicals that exceed quantities specified in Schedule 2.
Precautionary Statement	These describe the recommended measures that should be taken to minimise or prevent adverse effects resulting from exposure to, or improper storage or handling or, a hazardous chemical. These replace Safety phrases under the previous legislation.
SDS	A Safety Data Sheet (SDS) is a document which outlines specific health and safety information about the substance. Information includes:
	<ul> <li>whether the substance is classified as hazardous</li> <li>chemical aspects of the substance</li> <li>first aid advice</li> <li>risk controls to prevent injury</li> </ul>
Signal Word	These are used to indicate the relative level or severity of a hazard on a label.
Substances of Security Concern	Of the approximately 40,000 chemicals approved for use in Australia, 96 chemicals were identified by the Council of Australian Governments as requiring attention because of their potential for misuse by terrorists. These are known as chemicals of security concern.



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## 9. Supporting Documents

Lists the supporting and related Processes and Guidance Material, Legislative references, Australian and International Standards etc. that may be useful references for process users

- HR HSW-PR04 Records Management
- HR HSW-PR06 HSW Training, Competence and Awareness
- HR HSW-PR09 Risk Management
- HR HSW-PR09-WI03 HSW Risk Control
- HR HSW-PR09-TM01 HSW Risk Assessment Template
- HR HSW PR10 Incident Management and Investigation
- HR HSW-PR12 Workplace Inspections
- HR HSW-PR32-WI01 Storage, Use & Disposal of Hazardous Chemicals
- HR HSW-PR32- WI02 Carcinogen Substances Guidelines
- HR HSW-PR32-WI03 Scheduled Drugs and Poisons Guidelines
- HR HSW PR32-TM01 Hazardous Materials Pre-Purchase Risk Assessment
- HR HSW-PR47 HSW Health Monitoring
- RMIT's Emergency Management Plan.
- Occupational Health and Safety Regulations 2017 (VIC)
- Dangerous Goods (HCDG) Regulations 2016 (Vic)
- Dangerous Goods (Storage and Handling) Regulations 2012
- Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
- Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code).
- Hazardous Chemical Information System (HCIS)
- Compliance Code Hazardous Substances (Vic)
- National Code of Practice for Chemicals of Security Concern
- AS 2243.2 Safety in laboratories: Chemical aspects and storage
- AS 3780 The storge and handling of corrosive substances
- AS1319 Safety signs for the occupational environment
- AS 1345 Identification of the contents of piping, conduits and ducts
- AS 4326 Storage and handling of oxidizing agents.
- AS 1940 The storage and handling of flammable and combustible liquids.